Amendments to the Specification:

Please amend lines 31 of page 3 through line 7 of page 4 with the following paragraph:

The edge-based receiver, in which the barrel shifter is disposed, includes a multiphasic clock generator that runs plesiochronously with respect to the transmit clock. The edge-based receiver operates by detecting zero crossings or edges of the input data waveform. Zero crossings are those time instances where the two differential input signals cross each other, i.e., when the amplitudes of the two differential signals are equal and transitioning from one state to the other. By simply looking at the edges of the received waveform, the receiver effectively reconstructs the transmitted bits synchronous relative to a local clock. The reconstructed waveform is ~~the~~ decoded in the normal manner.

Please amend lines 13-20 of page 9 with the following paragraph:

Thus, the barrel shifter ~~402~~ <u>401</u> of the invention provides two pieces of information:

The position P_i closest to the mean zero crossing, denoted by P_w; and

The position C_i closest to the mean zero crossing, denoted by C_w.

P_w indicates the clock phase that is closest to the mean zero crossing, while C_w indicates whether the mean zero crossing happened early or late with respect to P_w. These two values provide the position of the mean zero crossing to an accuracy of +/- 0.0625 UI.